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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/068,879	02/11/2002	Keiji Naito	111938	1409

25944 7590 05/05/2004

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EXAMINER

LIU, MING HUN

ART UNIT PAPER NUMBER

2675

DATE MAILED: 05/05/2004

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Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/068,879

Applicant(s)

NAITO, KEIJIRO

Examiner

Ming-Hun Liu

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-20 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. ____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|--|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date ____ | 6) <input type="checkbox"/> Other: ____ |

DETAILED ACTION

Claim Rejections - 35 USC § 112

1. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2. Claims 1-20 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. As discussed in the office interview action, the term “predetermined signal” is unclear as to what the term is referring to. In claim 1, it appears as if the “predetermined signal” is referring to signal “SH” since claim 2 would preclude signal “Vin” as the predetermined signal. However, as exhibited in claim 16, the “predetermined signal” is “Vin”. Clarification of the term behind a “predetermined signal” is essential for the understanding of the patent.

3. Claims 1, 2, 4-6, 8-10 and 19 are rejected under 35 U.S.C. 102(e) as being unpatentable by US Patent 6,407,728 to Sekine.

In reference to claim 1, it can be seen from figure 3 that Sekine teaches a display with multiple pixels that receive multiple pixel signals from the driver circuit. Included also is a predetermined common voltage signal that is disseminated to the multiple pixels (item Com). From figure 4, it can be seen that the period in which the common voltage signal is produced does not include the period when display data driven. Lastly, as explained in the description of figure 4 (column 4, lines 36-45), Sekine explains that data signals D1 and D2, thus a group of pixel signals, are applied during the predetermined period.

In reference to claims 2, it can also be seen from figure 4 that the predetermined period (item Tcom) is only a portion of the effective horizontal period (item Tdat).

In reference to claims 4 and 8, it can be seen from figure 3, the common line is connected to the multiple pixels and the supplies the signal to the common electrodes.

In reference to claim 5 and 9, the drive circuit is a sample/hold circuit (item 111) that samples the signal from the input and outputs the predetermined sampled signal as a common signal.

In reference to claim 6 and 10, it can be seen from figure 3 that Sekine discloses a display with several scanning and signal lines that are used to select the multiple pixels disposed in the matrix. Furthermore signal line driving circuit also supplies the sample/hold circuit that supplies the common voltage signal.

Claim 19 is rejected on grounds similar to the rejection of claims 1, 2 and 4.

4. Claims 16-18 and 20 are rejected under 35 U.S.C. 102(b) as being unpatentable by US Patent 5,764,210 to Moon.

In reference to claims 16 and 20, Moon discloses in figure 6 a video signal-processing unit (item 14) where the data is generated (column 2, lines 49-51). In figure 7, it shown that the display signal is combined with a predetermined signal (item 20), which is used for generating a common signal to be supplied to the multiple pixels.

Claim 17 is rejected on grounds similar to the rejection of claim 16. Moon also discloses that an input terminal (item 13) used to display the display signal (column 4, line 8). He also

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teaches that the display signal has a predetermined signal embedded, thus generating a common signal that does not coincide with the driving timing period (column 4, lines 41-43).

In reference to claim 18, it is clear that Moon teaches an adjustment control circuit that adjusts the value included in the predetermined signal (item 19 and column 4, lines 27-28).

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claims 3, 7, 11-15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sekine

In reference to claims 3, 7 and 14, Sekine discloses an invention that is similar to the one being claimed, a display driving device that supplies the common voltage in the from the column driving circuit during horizontal scanning periods.

Sekine however, does not account for the case where the same common voltage signal can be driven in the gate/scanning line circuit and timing periods.

Sekine's invention can be modified to resemble the claimed embodiment by attaching the common line circuit to the gate driver instead of the column driver.

There is no disclosed criticality as to why the common line driver should be switched to the gate driver. The positioning of the common line feed is a design criterion that can be modified without altering the intended purpose of the circuit.

Claim 11 is rejected on grounds similar to the rejection of claim 4.

Claim 12 is rejected on grounds similar to the rejection of claim 5.

Claim 13 is rejected on grounds similar to the rejection of claim 6.

Response to Arguments

7. Applicant's arguments filed on 2/19/2004 have been fully considered and the examiner agrees with the distinction made by the applicant. However, the points argued by the applicant are not reflected in the claim language offered in the application. As discussed in the interview, the claims in its current state, still reads on the prior art references.

Conclusion

8. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event,

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however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ming-Hun Liu whose telephone number is 703-305-8488. The examiner can normally be reached on Mon-Fri.

The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Ming-Hun Liu


DENNIS-DOON CHOW
PRIMARY EXAMINER